

Serial No.: 10/716,563
Docket No.: 102-1011
Amendment dated March 21, 2007
Reply to the Final Office Action of January 22, 2007

REMARKS

Introduction

Applicant notes with appreciation the Examiner's indication that claims 5, 6, and 15-21 would be allowable if rewritten in independent form.

Upon entry of the foregoing amendment, claims 1-28 are pending in the application. Claims 1, 7, 16, 21, 24, and 25 have been amended. Claims 5 and 15 have been cancelled. No new matter is being presented. In view of the following remarks, reconsideration and allowance of all the pending claims are requested.

Allowable Subject Matter

Applicant appreciates the Examiner's indication that claims 5, 6, and 15-21 contain allowable subject matter.

Objections

Claims

The Examiner has objected to claims 1-6 and 26-28 due to informalities. Accordingly, claim 1 has been amended to fix the antecedent basis problem.

Rejection under 35 USC §103

1. Claims 1, 7-14, and 22-28 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. 2002/0191990 to Hirano in view of U.S. Patent No. 6,353,720 to Sakai et al. (hereinafter "Sakai"). Applicants respectfully request reconsideration and withdrawal of this rejection for at least the following reasons.

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Independent Claim 1

Claim 1 has been amended as proposed by the Examiner to include the limitations of allowable dependent claim 5. Therefore, withdrawal of this rejection is respectfully solicited.

Dependent Claims 2-4, 6, and 26-28

It is respectfully submitted that for at least the reasons that each of claims 2-4, 6, and 26-28 depends from independent claim 1, and therefore contain each of the features recited in claim 1, these claims are also patentable over the references relied upon by the Examiner, and withdrawal of the rejection of these claims is earnestly solicited.

Independent Claim 7

Independent claim 7 is currently amended to include all of the limitations of dependent claim 15 (now cancelled) therein, and is therefore allowable as stated by the Examiner due to the addition of the limitations of allowable claim 15. As amended, neither Hirano nor Sakai disclose, teach or suggest all the limitations now present in independent claim 7. In particular, neither Hirano nor Sakai, as relied upon the Examiner to reject the original independent claim 7, teach or suggest, among other things, "wherein the toner supplying roller comprises a cylinder and a fur attached to a surface of the cylinder in a radial direction of the cylinder by a first distance from the surface of the cylinder; and a cleaning roller is disposed to be spaced-apart from the surface of the cylinder by a second distance to remove the toner from the toner supplying roller by shaking the fur of the cylinder," as presently recited in independent claim 7. More specifically, although Sakai may teach "toner being efficiently removed by cleaning unit 45," as stated on page 6, line 6 of the Office Action of January 22, 2007, Sakai does not teach or suggest that toner is removed "by shaking the fur of the cylinder," as presently recited in independent claim 7.

Furthermore, none of Hirano and Sakai teaches or suggests motivation to combine the two-rollers of Sakai with the developing roller 20 of Hirano. Thus, it is respectfully submitted that since Hirano and Sakai, either individually or combined, do not teach all of the elements set forth in currently amended claim 7, independent claim 7 is itself patentably distinguishable from

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Hirano and Sakai, and withdrawal of this rejection and allowance of this claim are respectfully solicited.

Dependent Claims 8-14 and 16-22

With respect to claims 8-14, 16-20 and 22, it is respectfully submitted that for at least the reason that dependent claims 8-14, 16-20 and 22 depend from independent claim 7, which is allowable over Hirano and Sakai, either individually or combined, for at least the reasons pointed out above, and therefore contains each of the features as recited in claim 7, dependent claims 8-14, 16-20 and 22 are also allowable over Hirano and Sakai. Accordingly, withdrawal of this rejection and allowance of these claims are respectfully requested.

With respect to claim 21, the examiner indicated that claim 21 would be allowable if rewritten to include the limitations of rejected base claim 7. Accordingly, claim 21 has been amended as an independent claim to include the limitations of claim 7. Therefore, withdrawal of this rejection and allowance of this claim are respectfully requested.

Independent Claims 23-25

On page 2, lines 20-22 of the Office Action of January 22, 2007, the Examiner admits that Hirano does not teach or suggest "a cleaning unit to shake the fur of the toner supplying roller to remove the toner from the toner supplying roller," as recited in independent claim 23. The Examiner relies on Sakai to teach the limitations missing from Hirano. On page 9 of the Office Action of January 22, 2007, the Examiner alleges that Sakai teaches that "the movement between the two rollers caused by friction must somehow shake a portion of the toner supplying roller." However, Applicants respectfully submit that Sakai does not teach or suggest "a cleaning unit to shake the fur of the toner supplying roller to remove the toner from the toner supplying roller," as recited in independent claim 23. Nowhere does Sakai even imply that a shaking of a fur by a cleaning unit occurs in Sakai's image forming device. In contrast, Sakai uses a cleaning unit 45 to scrape the toner from the supplying roller 22 and the regulating roller 43 (See col. 23, lines 23-29 of Sakai). Therefore, Sakai does not obviously teach or suggest "a cleaning unit to shake the fur of the toner supplying roller to remove the toner from the toner

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supplying roller,” as recited in independent claim 23.

Thus, Sakai does not teach or suggest all of the limitations recited in independent claim 23. Accordingly, Applicant respectfully submits that the Examiner has not met the burden of establishing a prima facie case of obviousness as set forth in MPEP § 2142, portions of which are cited as follows:

“The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness...”

...To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).”

Accordingly, Applicant respectfully submits that independent claim 23 is allowable over both Hirano and Sakai, either individually or combined, and withdrawal of the §103 rejection and allowance of claim 19 are respectfully solicited.

Claims 24 and 25 have been amended to include “removing the toner remaining on a toner supplying roller with a cleaning roller by shaking the fur of the toner supplying roller.” For at least the reasons stated above with reference to independent claim 23, independent claims 24 and 25 are deemed to be in condition for allowance over both Hirano and Sakai, either individually or combined. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

2. Claims 1-4, 7-14, and 22-28 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,381,434 to Yamamoto in view of Sakai. Applicants respectfully request reconsideration and withdrawal of this rejection for at least the following reasons.

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Independent Claim 1

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Dependent Claims 2-4, 6, and 26-28

It is respectfully submitted that for at least the reasons that each of claims 2-4, 6, and 26-28 depends from independent claim 1, and therefore contain each of the features recited in claim 1, these claims are also patentable over the references relied upon by the Examiner, and withdrawal of the rejection of these claims is earnestly solicited.

Independent Claim 7

Independent claim 7 is currently amended to include all of the limitations of dependent claim 15 (now cancelled) therein, and is therefore allowable as stated by the Examiner due to the addition of the limitations of allowable claim 15. As amended, neither Yamamoto nor Sakai disclose, teach or suggest all the limitations now present in independent claim 7. In particular, neither Yamamoto nor Sakai, as relied upon by the Examiner to reject the original independent claim 7, teach or suggest, among other things, "wherein the toner supplying roller comprises a cylinder and a fur attached to a surface of the cylinder in a radial direction of the cylinder by a first distance from the surface of the cylinder; and a cleaning roller is disposed to be spaced-apart from the surface of the cylinder by a second distance to remove the toner from the toner supplying roller by shaking the fur of the cylinder," as presently recited in independent claim 7. More specifically, although Sakai may teach "toner being efficiently removed by cleaning unit 45," as stated on page 6, line 6 of the Office Action of January 22, 2007, Sakai does not teach or suggest that toner is removed "by shaking the fur of the cylinder," as presently recited in independent claim 7.

Thus, it is respectfully submitted that since Yamamoto and Sakai, either individually or combined, do not teach all of the elements set forth in currently amended claim 7, independent claim 7 is itself patentably distinguishable from Yamamoto and Sakai, and withdrawal of this rejection and allowance of this claim are respectfully solicited.

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Dependent Claims 8-14 and 22

With respect to claims 8-14 and 22, it is respectfully submitted that for at least the reason that dependent claims 8-14 and 22 depend from independent claim 7, which is allowable over Yamamoto and Sakai, either individually or combined, for at least the reasons pointed out above, and therefore contains each of the features as recited in claim 7, dependent claims 8-14 and 22 are also allowable over Yamamoto and Sakai. Accordingly, withdrawal of this rejection and allowance of these claims are respectfully requested.

Independent Claims 23-25

On page 2, lines 5-7 of the Office Action of January 22, 2007, the Examiner admits that Yamamoto does not teach or suggest "a cleaning unit to shake the fur of the toner supplying roller to remove the toner from the toner supplying roller," as recited in independent claim 23. The Examiner relies on Sakai to teach the limitations missing from Yamamoto. As stated above, on page 9 of the Office Action of January 22, 2007, the Examiner alleges that Sakai teaches that "the movement between the two rollers caused by friction must somehow shake a portion of the toner supplying roller." However, Applicants respectfully submit that Sakai does not teach or suggest "a cleaning unit to shake the fur of the toner supplying roller to remove the toner from the toner supplying roller," as recited in independent claim 23. Nowhere does Sakai even imply that a shaking of a fur by a cleaning unit occurs in Sakai's invention. In contrast, Sakai uses a cleaning unit 45 to scrape the toner from the supplying roller 22 and the regulating roller 43 (See col. 23, lines 23-29 of Sakai). Therefore, Sakai does not obviously teach or suggest "a cleaning unit to shake the fur of the toner supplying roller to remove the toner from the toner supplying roller," as recited in independent claim 23.

Thus, Sakai does not teach or suggest all of the limitations recited in independent claim 23. Accordingly, Applicant respectfully submits that the Examiner has not met the burden of establishing a prima facie case of obviousness as set forth in MPEP § 2142.

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Accordingly, Applicant respectfully submits that independent claim 23 is allowable over both Yamamoto and Sakai, either individually or combined, and withdrawal of the §103 rejection and allowance of claim 19 are respectfully solicited.

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Conclusion

It is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, there being no other objections or rejections, this application is in condition for allowance, and a notice to this effect is earnestly solicited.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

If any further fees are required in connection with the filing of this amendment, please charge the same to our Deposit Account No. 502827.

Respectfully submitted,

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